

In the Claims

Claims 2, 14 and 27 have been cancelled without prejudice.

Claims 1, 6, 8, 11, 13, 18, 20, 23 and 26 have been amended and Claims 30-33 have been added as follows:

1. (Currently Amended) A microplate, comprising:

a frame including a plurality of wells formed therein, said frame is manufactured from a thermoplastic material that has been mixed with a non-toxic surface active material that can enhance a lubricious property of a surface of said frame which makes it easier to ~~handle said frame~~ remove said frame from a thermocycler, wherein said non-toxic surface active material has a percentage of weight relative to the thermoplastic material that was determined in order to minimize extraction of said non-toxic surface active material into the wells of said frame during the operation of the thermocycler.

Claim 2 (Currently Canceled)

3. (Original) The microplate of Claim 1, wherein said frame can be easily removed from an injection molding machine.

4. (Original) The microplate of Claim 1, wherein said non-toxic surface active material is a surfactant.

5. (Original) The microplate of Claim 4, wherein said surfactant has a hydrophilic-lipophilic balance number which is less than two.

6. (Currently Amended) ~~The microplate of Claim 4~~ A microplate, comprising:
a frame including a plurality of wells formed therein, said frame is manufactured from a thermoplastic material that has been mixed with a non-toxic surface active material that can enhance a lubricious property of a surface of said frame which makes it easier to handle said frame, wherein said non-toxic surface active material is a surfactant and wherein said surfactant is a polyoxyethylene fatty ether.

7. (Original) The microplate of Claim 6, wherein said polyoxyethylene fatty ether has a molecular structure of $\text{CH}_3(\text{CH}_2)_{17}(\text{OCH}_2\text{CH}_2)_n\text{-OH}$.

8. (Currently Amended) The microplate of Claim 1, wherein said non-toxic surface active material is a an ethoxylated fatty alcohol.

9. (Original) The microplate of Claim 1, wherein said non-toxic surface active material is stearyl alcohol.

10. (Original) The microplate of Claim 1, wherein said thermoplastic material is polypropylene.

11. (Currently Amended) A multiwell plate manufactured in such a way so as to improve the ability to properly carry out a polymerase chain reaction process, said multiwell plate comprising:

a frame including a plurality of wells formed therein, said frame is manufactured from a thermoplastic material that has been mixed with a non-toxic surface active that can enhance a lubricious property of a surface of said frame which makes it easier to remove said frame from a thermocycler, wherein said non-toxic surface active material has a percentage of weight relative to the thermoplastic material that was determined in order to minimize extraction of said non-toxic surface active material into the wells of said frame during the operation of the thermocycler.

12. (Original) The microplate of Claim 11, wherein said non-toxic surface active material is a surfactant with a hydrophilic-lipophilic balance number of less than two.

13. (Currently Amended) ~~The microplate of Claim 11~~ A multiwell plate manufactured in such a way so as to improve the ability to properly carry out a polymerase chain reaction process, said multiwell plate comprising:

a frame including a plurality of wells formed therein, said frame is manufactured from a thermoplastic material that has been mixed with a non-toxic surface active that can enhance a lubricious property of a surface of said frame which makes it easier to remove said frame from a thermocycler, wherein said non-toxic surface active material is a surfactant and wherein said surfactant is a polyoxyethylene fatty ether that has a molecular structure of $\text{CH}_3(\text{CH}_2)_{17}(\text{OCH}_2\text{CH}_2)_n\text{-OH}$.

Claim 14 (Currently Canceled)

15. (Original) The microplate of Claim 11, wherein said non-toxic surface active material is stearyl alcohol.

16. (Original) The microplate of Claim 11, wherein said thermoplastic material is polypropylene.

17. (Original) The microplate of Claim 11, wherein said frame has a footprint capable of being handled by a robotic handling system.

18. (Currently Amended) A method for making a microplate, said method comprising the steps of:

liquefying a non-toxic surface active material;
coating pellets of thermoplastic material with said liquefied non-toxic surface active material;
extruding said pellets of thermoplastic material coated with said non-toxic surface active material to create a melt blend;
cooling said extruded melt blend;
pelletizing said cooled melt blend;
melting said pelletized melt blend;
injecting said melted blend into a mold cavity of an injection molding machine, said mold cavity includes sections shaped to form said microplate;
cooling the injected melt blend to create said microplate; and
removing said microplate from the injection molding machine, wherein the non-toxic surface active material enhances a lubricious property of a surface of said microplate which makes it easier to remove said microplate from the injection molding machine and wherein said non-toxic surface active material has a percentage of weight relative to the thermoplastic material that was determined in order to minimize extraction of said non-toxic surface active material into wells of said microplate while said microplate is located within an operating thermocycler.

19. (Original) The method of Claim 18, wherein said non-toxic surface active material is a surfactant with a hydrophilic-lipophilic balance number of less than two.

20. (Currently Amended) ~~The method of Claim 18~~ A method for making a microplate, said method comprising the steps of:

liquefying a non-toxic surface active material;

coating pellets of thermoplastic material with said liquefied non-toxic surface active material;

extruding said pellets of thermoplastic material coated with said non-toxic surface active material to create a melt blend;

cooling said extruded melt blend;

pelletizing said cooled melt blend;

melting said pelletized melt blend;

injecting said melted blend into a mold cavity of an injection molding machine, said mold cavity includes sections shaped to form said microplate;

cooling the injected melt blend to create said microplate; and

removing said microplate from the injection molding machine, wherein the non-toxic surface active material enhances a lubricious property of a surface of said microplate which makes it easier to remove said microplate from the injection molding machine, wherein said non-toxic surface active material is a surfactant which is a polyoxyethylene fatty ether that has a molecular structure of $\text{CH}_3(\text{CH}_2)_{17}-(\text{OCH}_2\text{CH}_2)_n-\text{OH}$.

21. (Original) The method of Claim 18, wherein said non-toxic surface active material is stearyl alcohol.

22. (Original) The method of Claim 18, wherein said thermoplastic material is polypropylene.

23. (Currently Amended) A method for using a microplate, said method comprising the steps of:

placing the microplate into a thermocycler, said microplate includes:

a frame having a plurality of wells formed therein, said microplate is manufactured from a combination of thermoplastic material and non-toxic surface active material;

operating the thermocycler so as to cycle the temperature of contents within the wells of said microplate; and

removing the microplate from the thermocycler, wherein the non-toxic surface active material enhances a lubricious property of a surface of said microplate which makes it easier to remove said microplate from the thermocycler and wherein said non-toxic surface active material has a percentage of weight relative to the thermoplastic material that was determined in order to minimize extraction of said non-toxic surface active material into the wells of said frame during the operation of the thermocycler.

24. (Original) The method of Claim 23, wherein said microplate is manufactured in such a way so as to improve the ability to properly carry out a polymerase chain reaction process.

25. (Original) The method of Claim 23, wherein said non-toxic surface active material is a surfactant with a hydrophilic-lipophilic balance number of less than two.

26. (Currently Amended) ~~The method of Claim 23~~ A method for using a microplate, said method comprising the steps of:

placing the microplate into a thermocycler, said microplate includes:

a frame having a plurality of wells formed therein, said microplate is manufactured from a combination of thermoplastic material and non-toxic surface active material;

operating the thermocycler so as to cycle the temperature of contents within the wells of said microplate; and

removing the microplate from the thermocycler, wherein the non-toxic surface active material enhances a lubricious property of a surface of said microplate which makes it easier to remove said microplate from the thermocycler, wherein said non-toxic surface active material is a surfactant which is a polyoxyethylene fatty ether that has a molecular structure of $\text{CH}_3(\text{CH}_2)_{17}(\text{OCH}_2\text{CH}_2)_n\text{-OH}$.

Claim 27 (Currently Canceled)

28. (Original) The method of Claim 23, wherein said non-toxic surface active material is stearyl alcohol.

29. (Original) The method of Claim 23, wherein said thermoplastic material is polypropylene.

30. (Added) The microplate of Claim 1, wherein said non-toxic surface active material is an ester of a fatty acid.

31. (Added) The microplate of Claim 1, wherein said non-toxic surface active material is a solid silicone.

32. (Added) The microplate of Claim 1, wherein said non-toxic surface active material is a fluoropolymer.

33. (Added) The microplate of Claim 1, wherein said non-toxic surface active material is an internal lubricant agent.